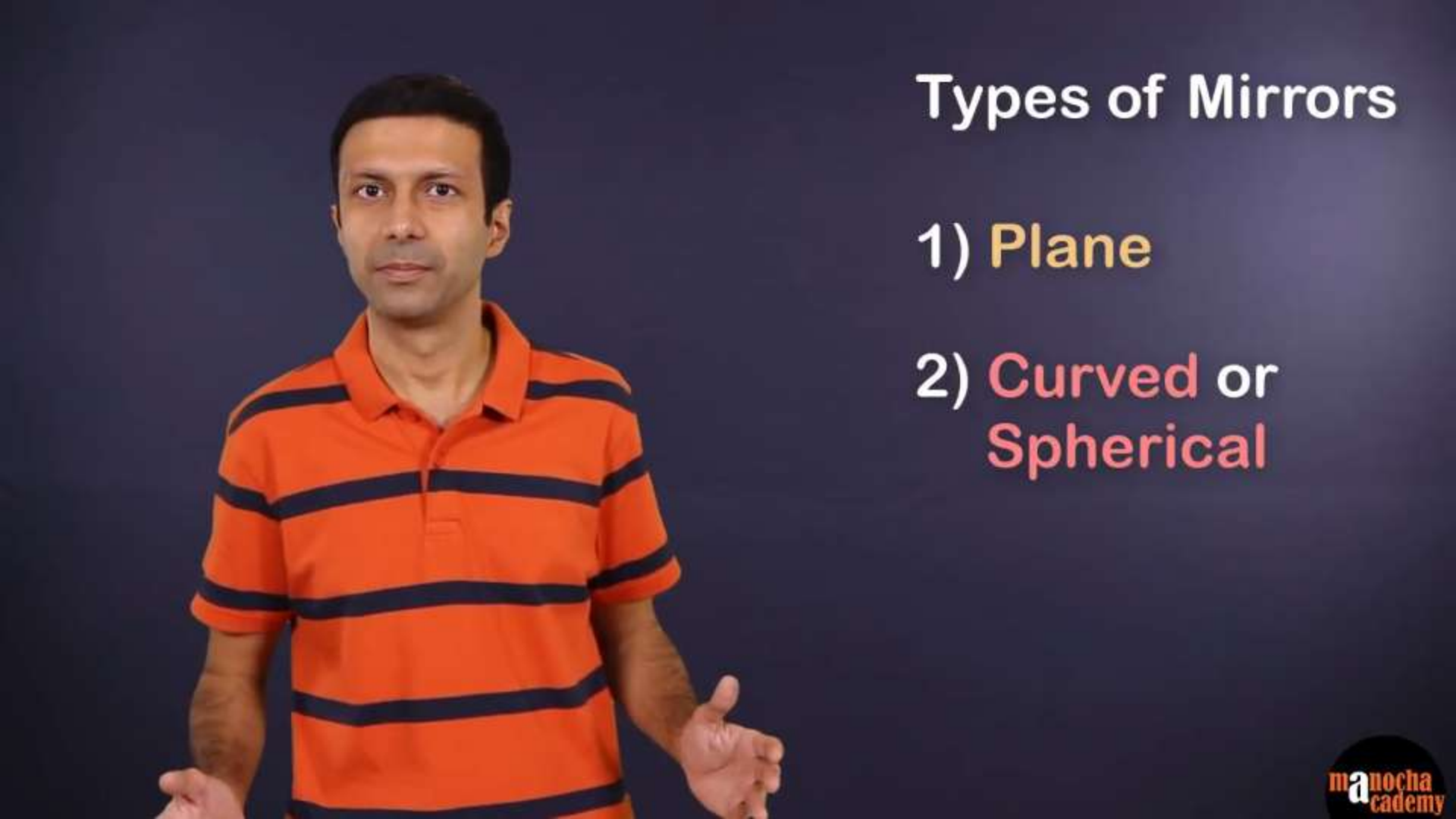
Concave and Convex Mirrors


Types of Mirrors
1) Plane
2) Curved or Spherical
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Spherical Mirrors

1) Concave

2) Convex

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3 Types of Mirrors
1) Plane
2) Concave
3) Convex
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same
height

inverted

magnified
if I go close
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short
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Plane

Concave

Convex

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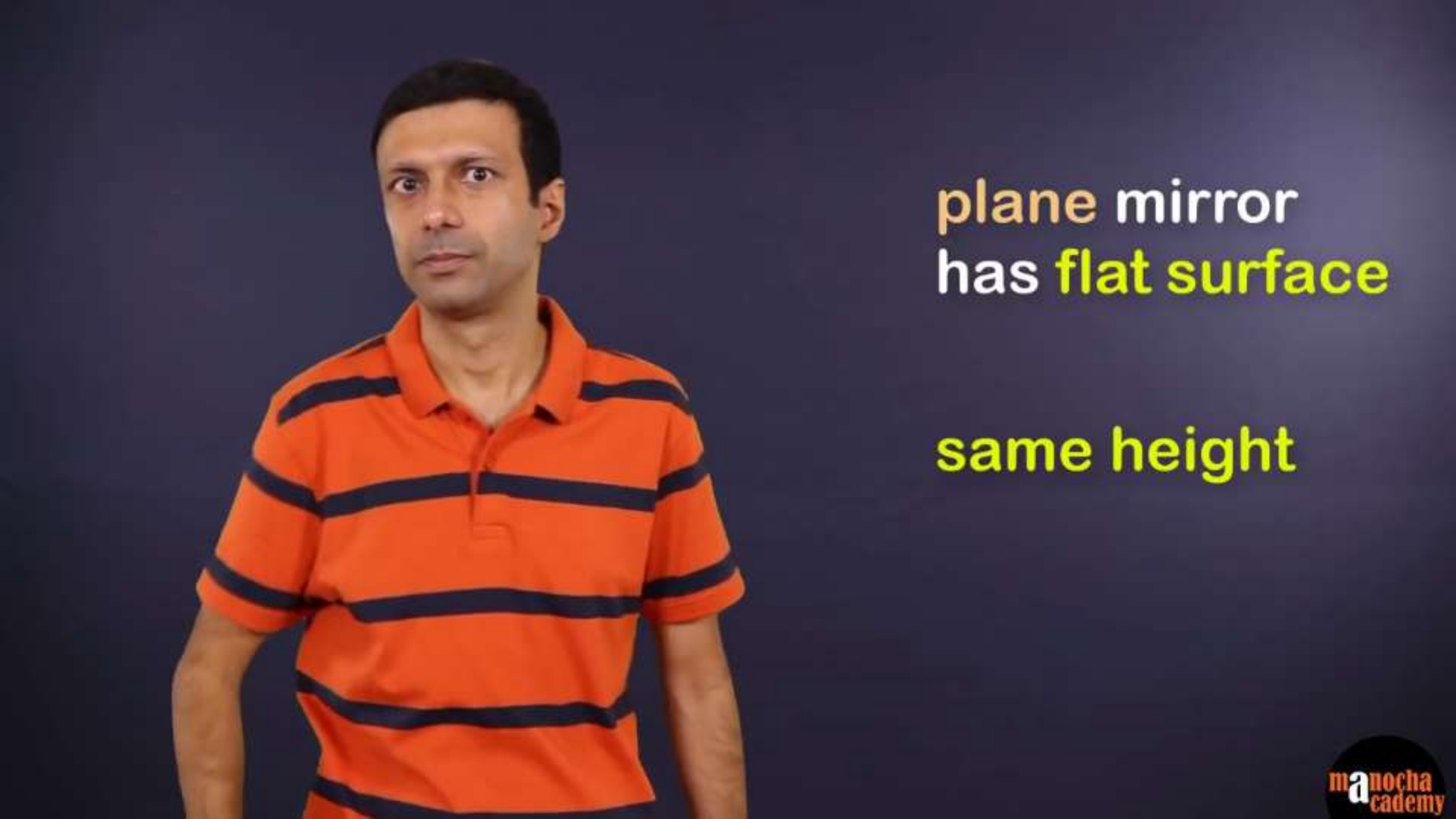
plane mirror
has flat surface
same height
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Concave mirror
is curved
inwards

inverted

smaller

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magnified

Concave mirror
is the only mirror

inverted

Concave mirror
is the only mirror

magnified

Convex
mirror

smaller
upright

Image in a convex mirror is always diminished and upright

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I am using all 3 mirrors everyday !
1) Plane
2) Concave
3) Convex
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shaving
type of mirror ?
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shaving
Concave mirror
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shaving
face is magnified
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combing
type of mirror ?
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combing
Plane mirror
manocha academy

in an elevator
type of mirror ?
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in an elevator
Plane mirror
manocha cademy

driving

rear view mirror

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driving
side mirror

driving
side mirror
type of mirror ?
rear view mirror
manocha academy

driving
side mirror
Convex
mirrors
rear view mirror
manocha academy

at road
intersections
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at road intersections

Convex mirror

Concave mirror

Plane mirror

Plane mirror

Convex mirror

Convex mirror

Convex mirror

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sphere

imagine the
ball to be shiny
like a mirror

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spherical mirror
comes from a sphere
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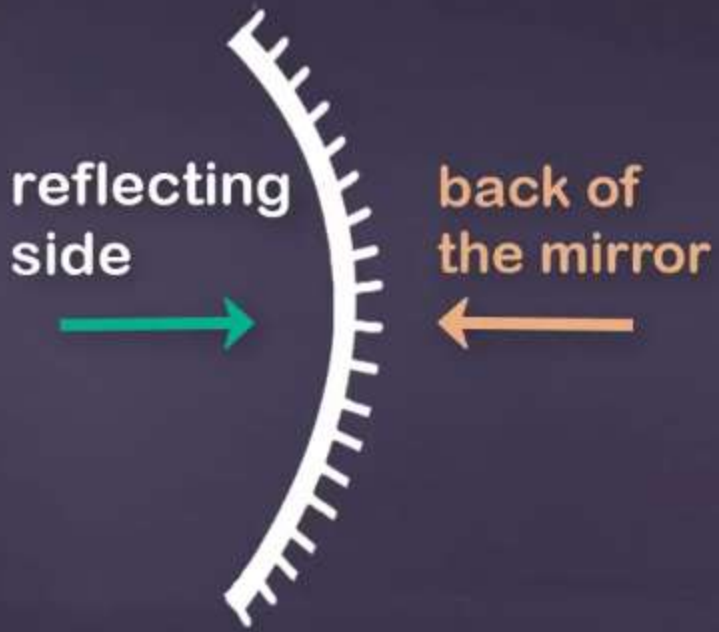
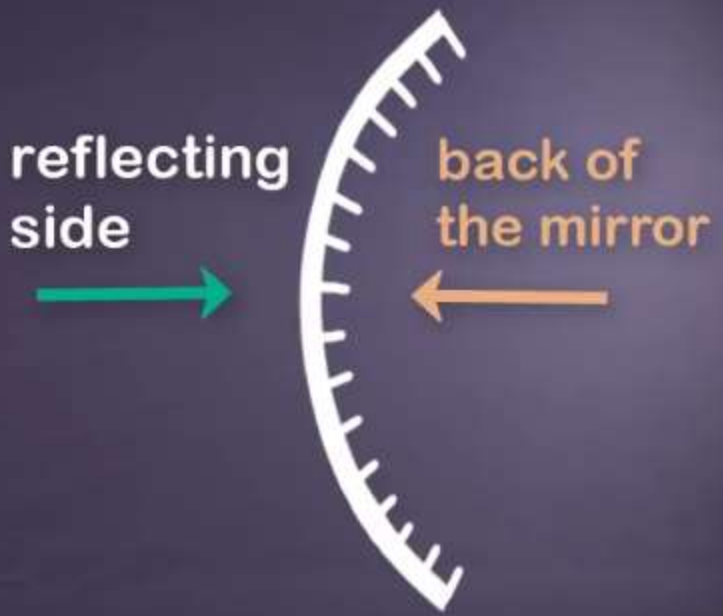
Concave
from the
inside

Convex
from the
outside



Concave mirror



Convex mirror

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why these mirrors
behave differently

?

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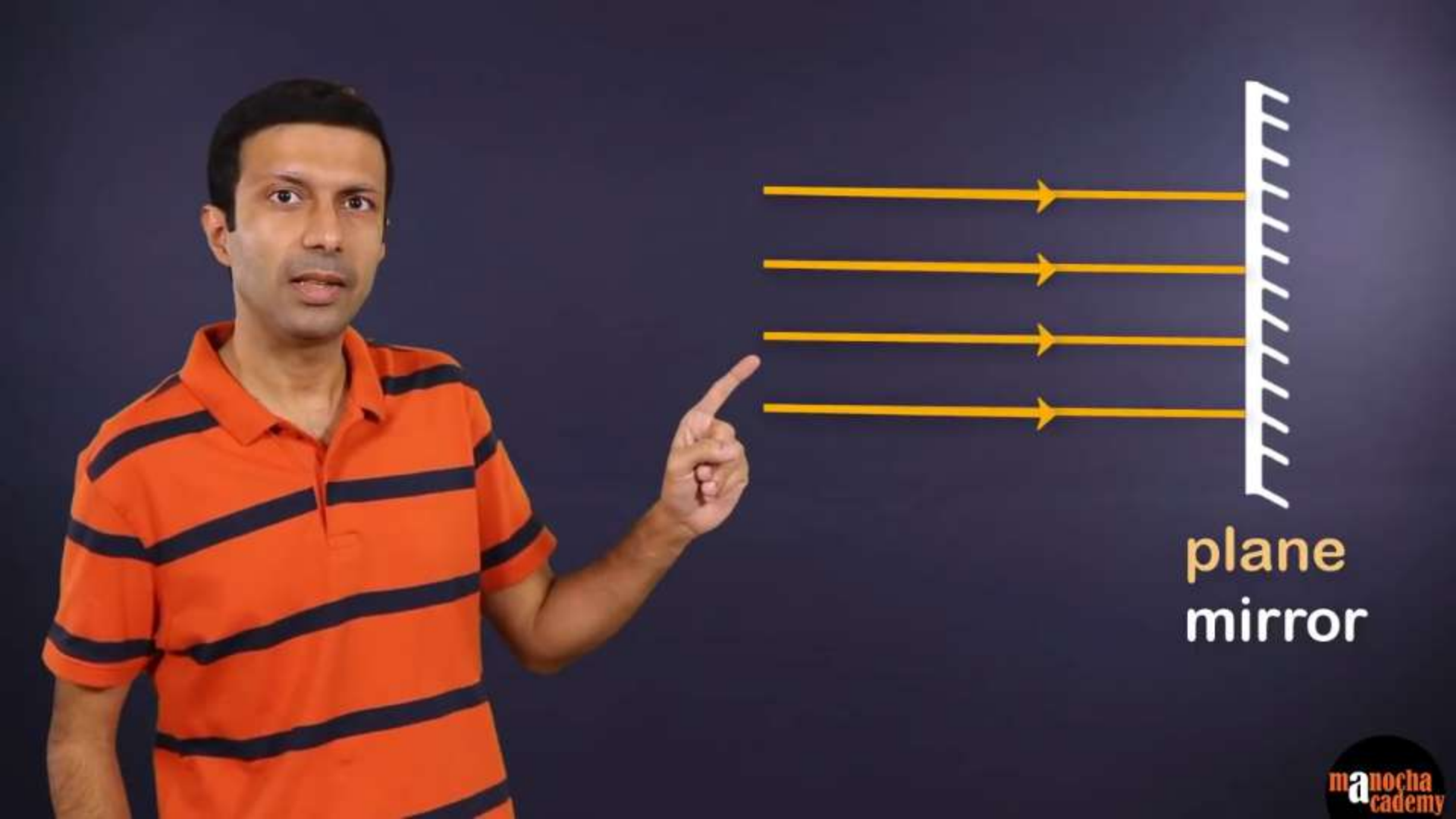
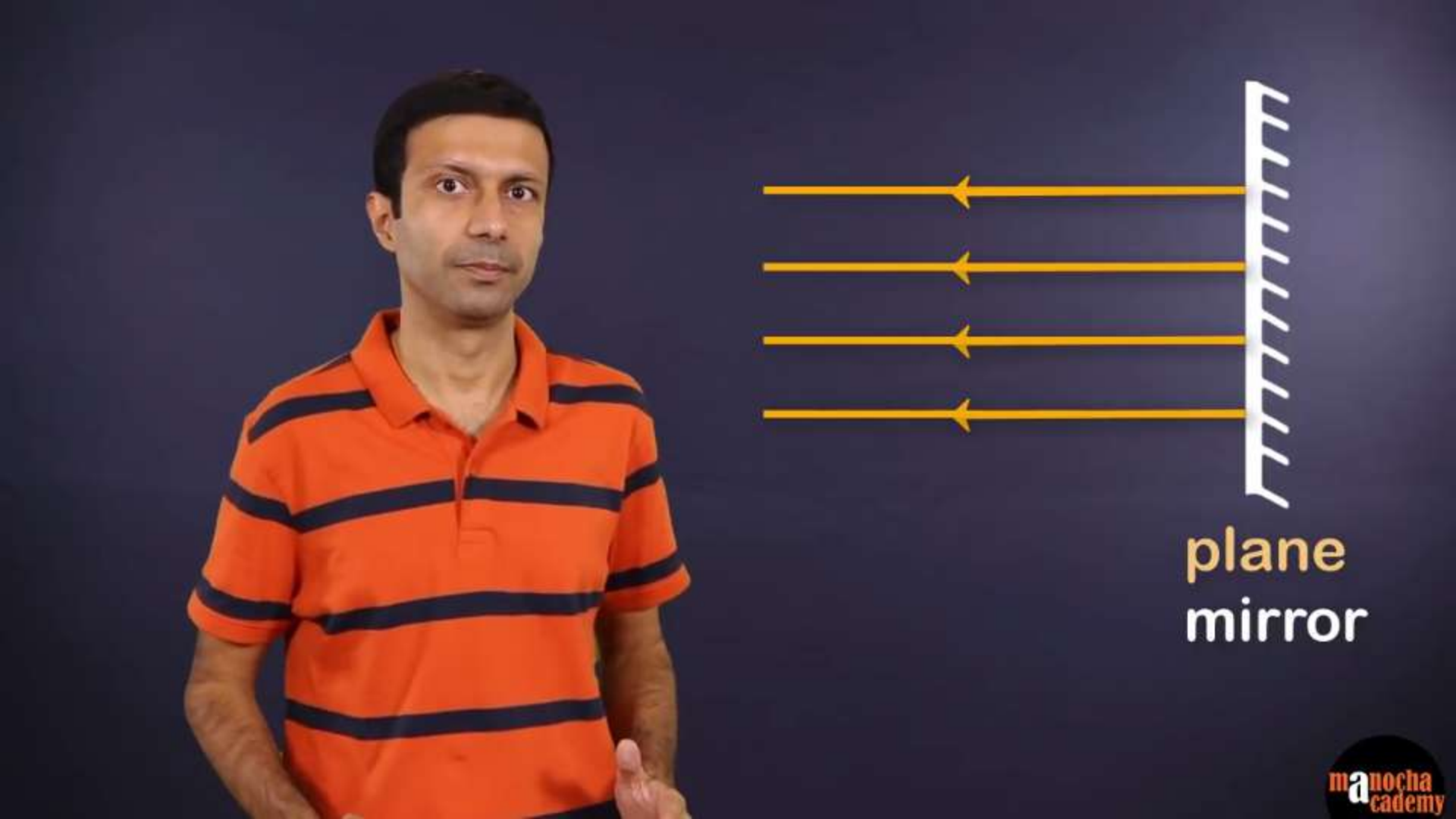
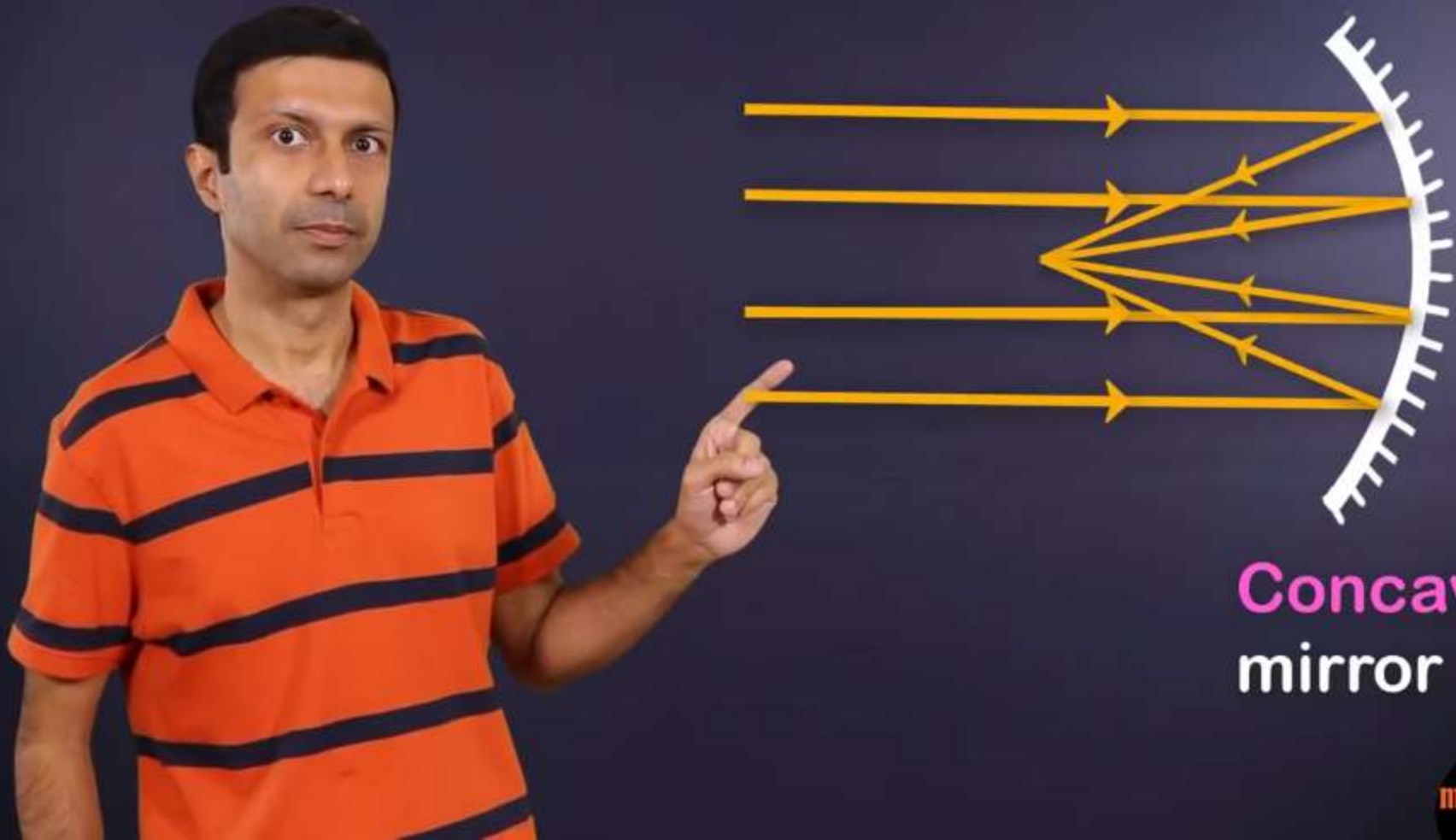
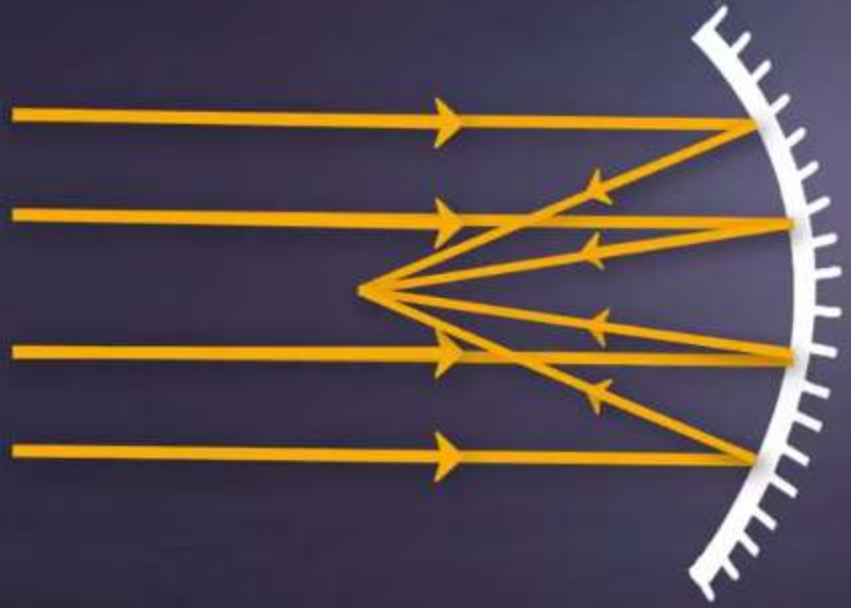

plane
mirror


plane
mirror


Concave
mirror



converging
mirror

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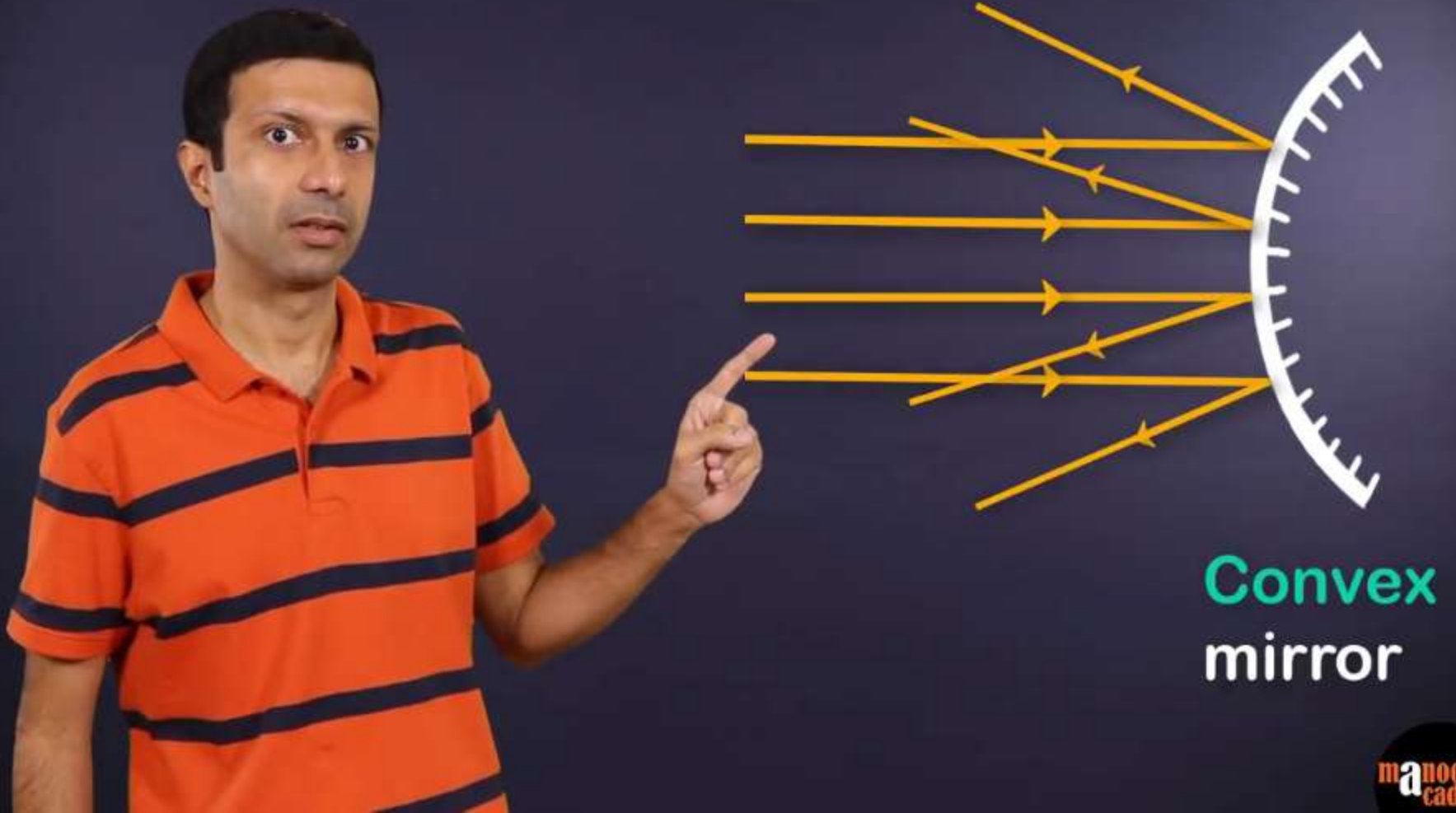
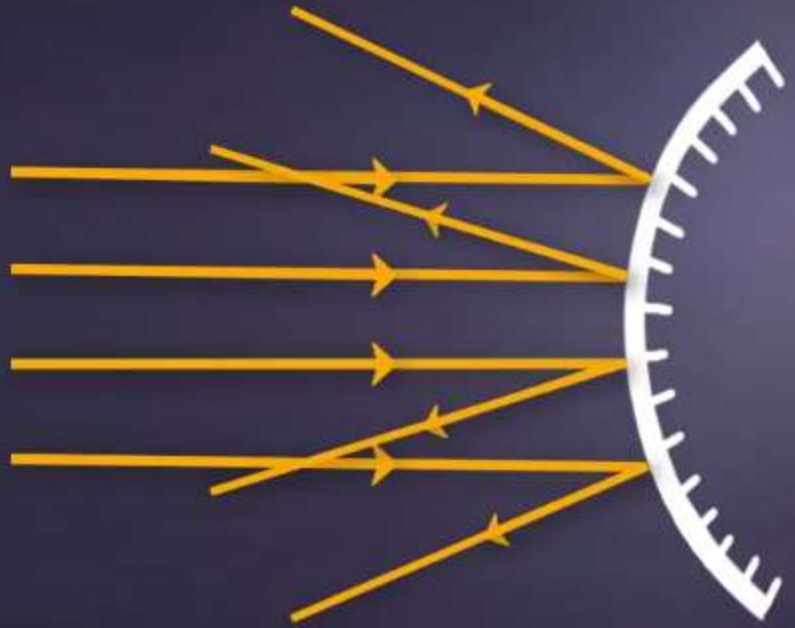

Convex
mirror



diverging
mirror

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Plane mirror	Concave mirror	Convex mirror
Flat surface	Curved inwards	Curved outwards
Parallel rays remain parallel	Converging mirror	Diverging mirror
Always forms upright image and of the same size	Can form inverted image or magnified and upright image	Always forms upright and diminished image

Laws of Reflection
Always hold for both plane and curved mirrors
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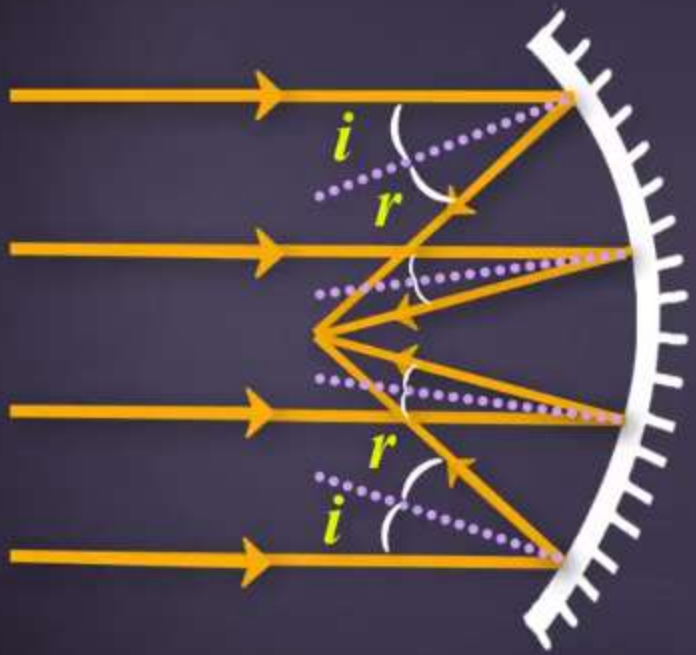
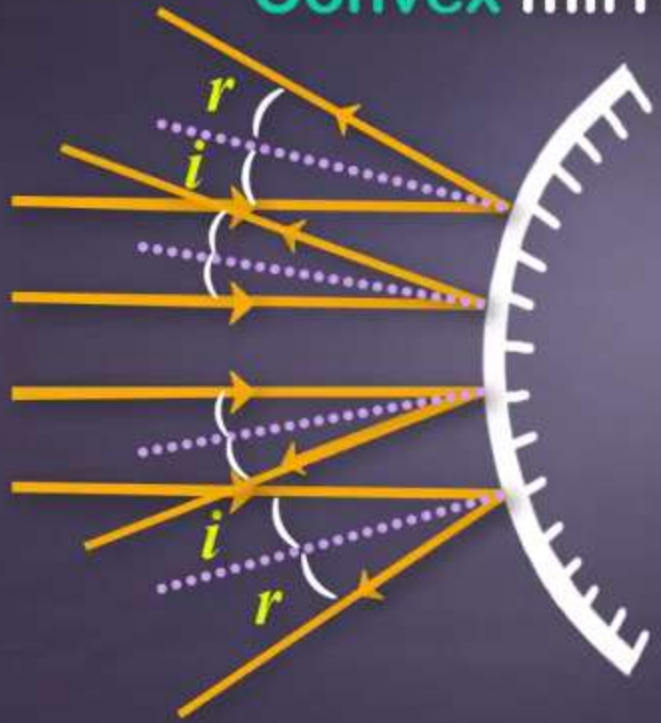
Concave mirror

curved shape

Convex mirror





angle of incidence (i) = angle of reflection (r)

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Important terms for spherical mirrors

- Pole
- Focus
- Centre of curvature
- Principal axis

Concave mirror

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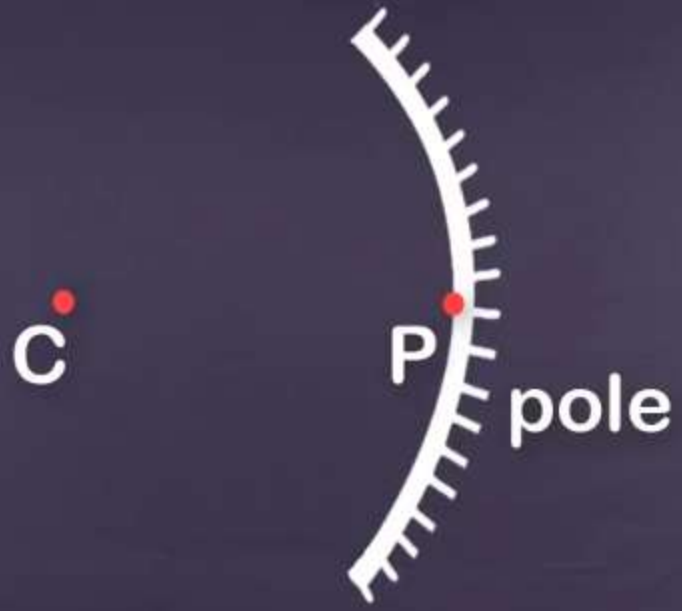

Concave mirror

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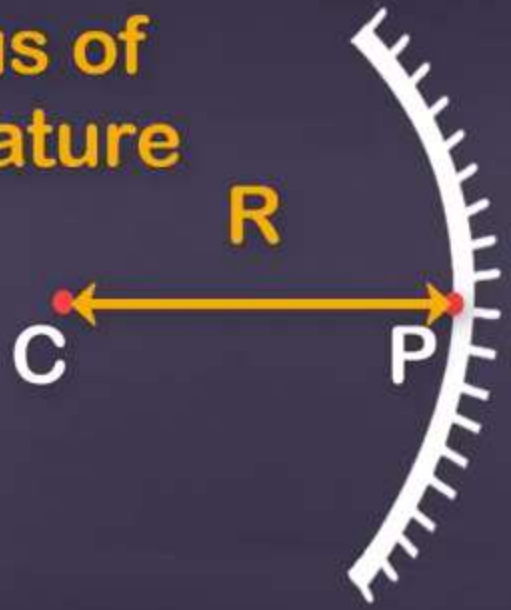
radius of curvature



Concave mirror

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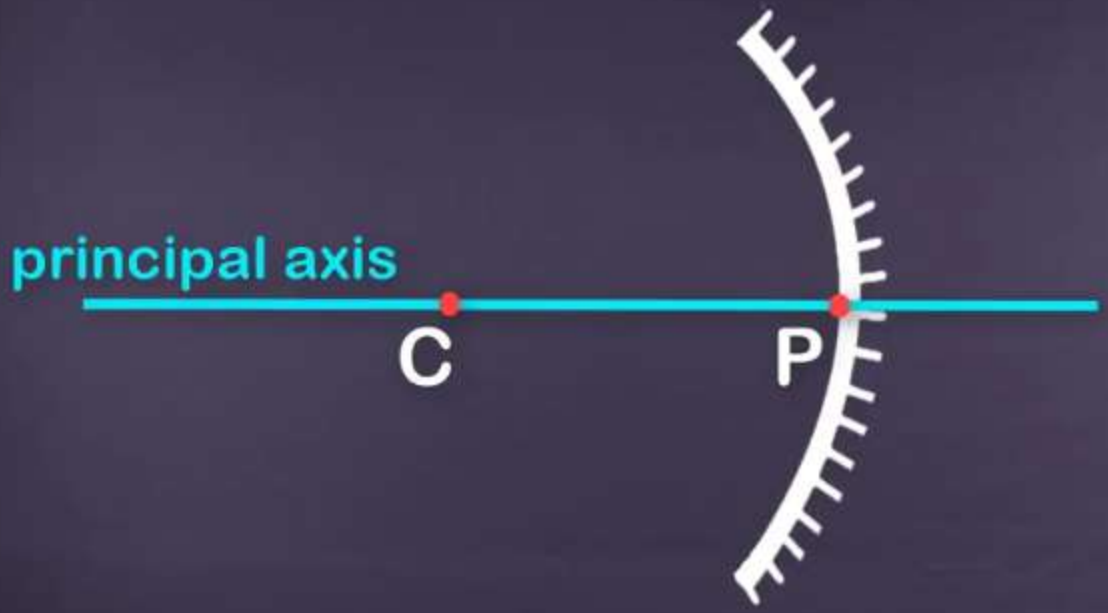

Concave mirror

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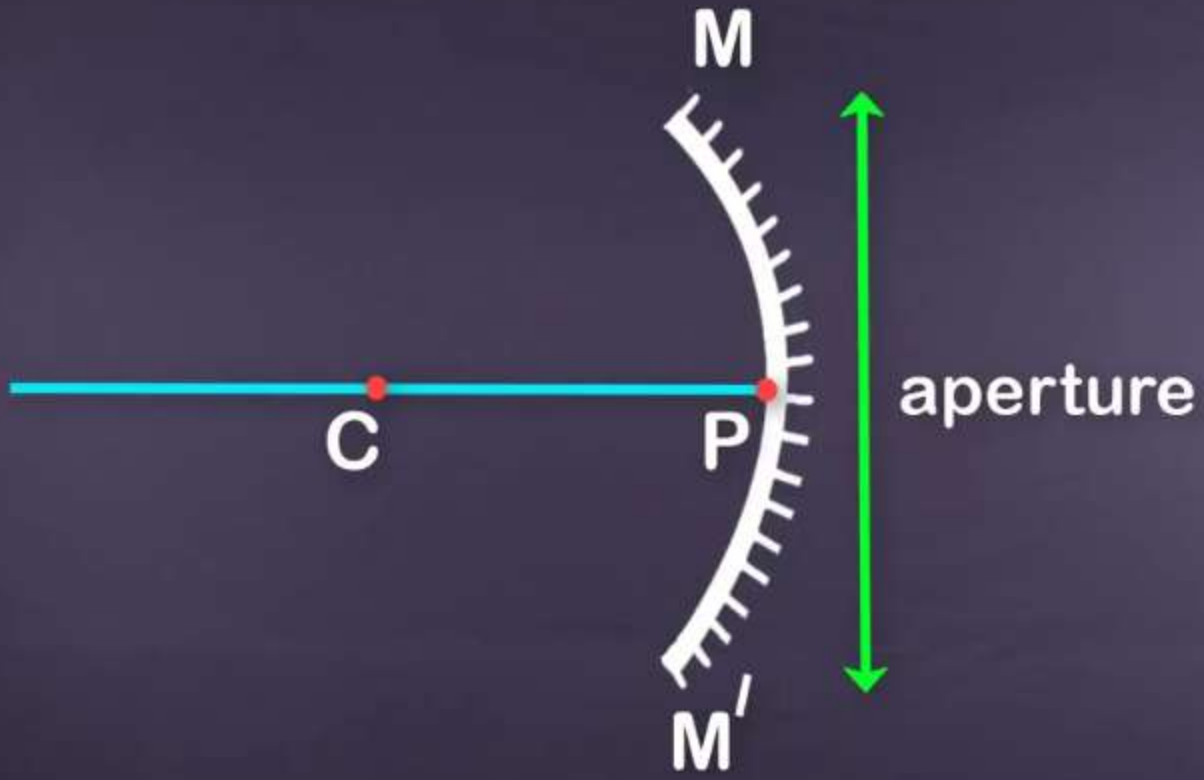

Concave mirror

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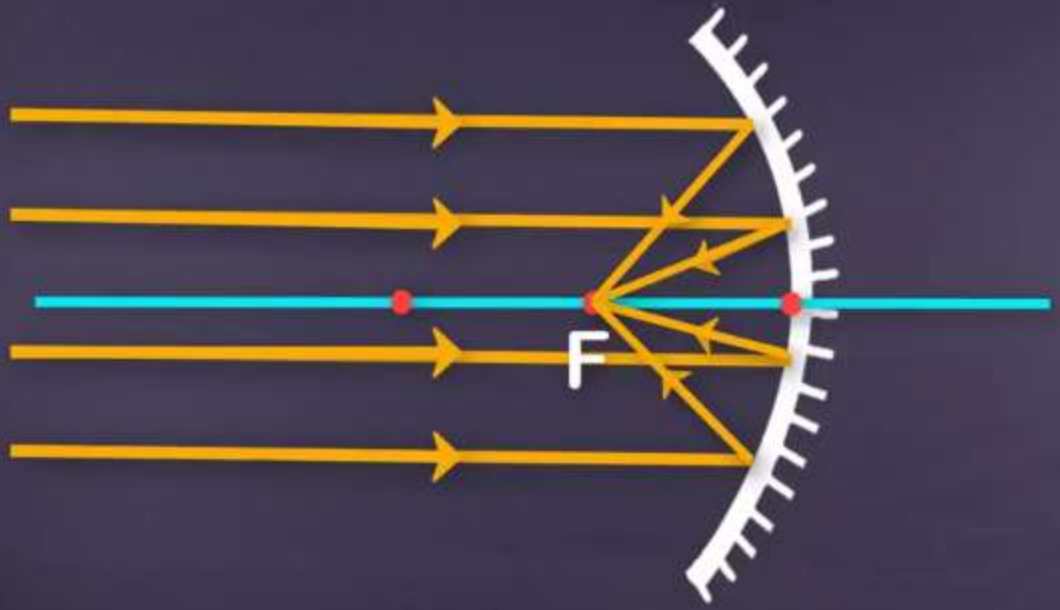

Concave mirror

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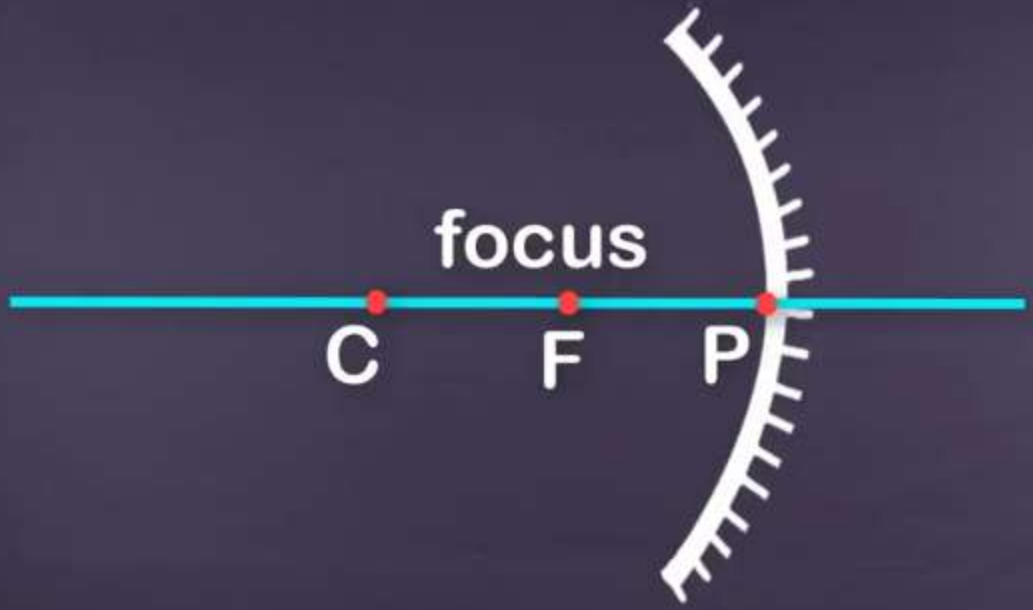

Concave mirror

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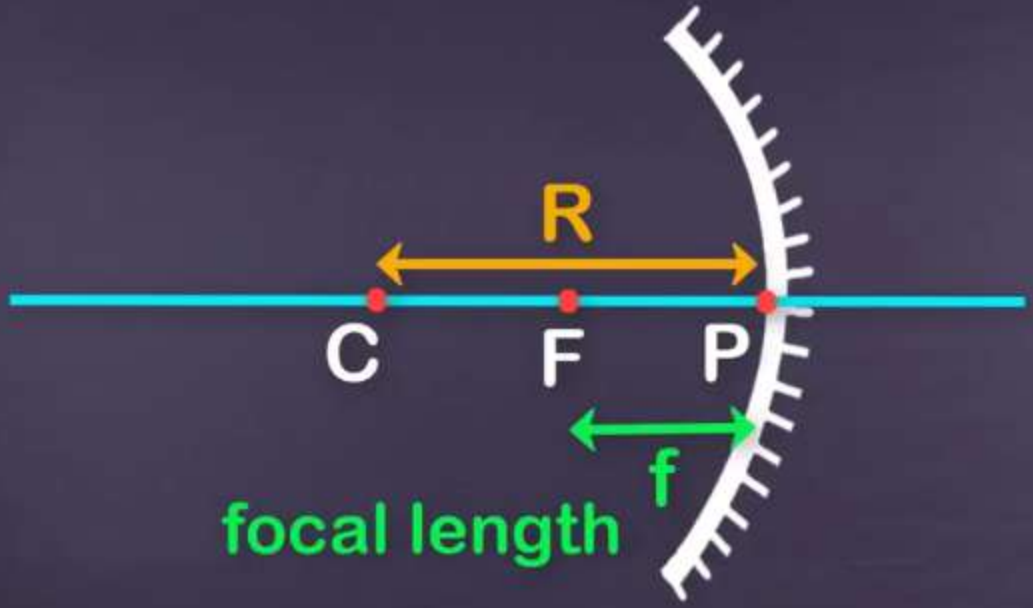

$$f = \frac{R}{2}$$

Concave mirror

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Convex mirror

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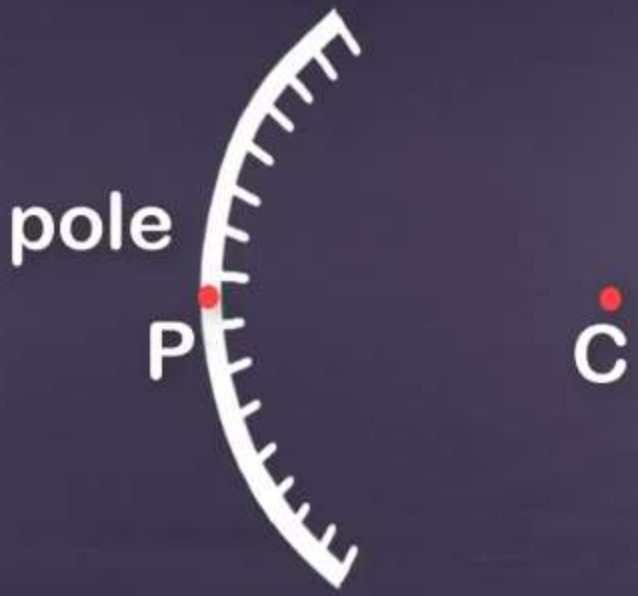

Convex mirror

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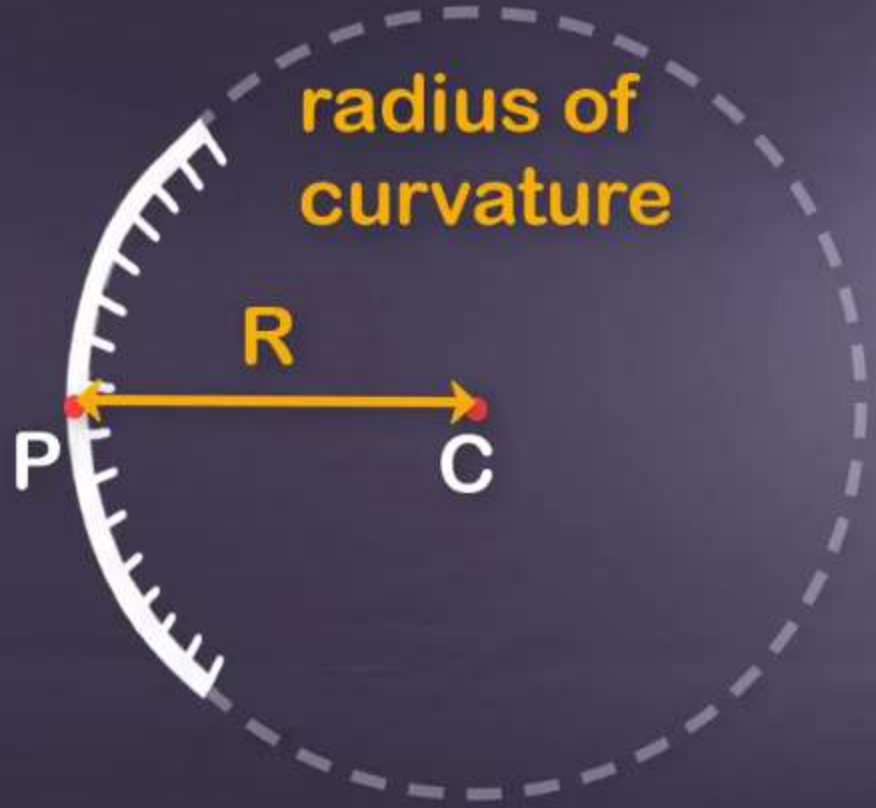

Convex mirror

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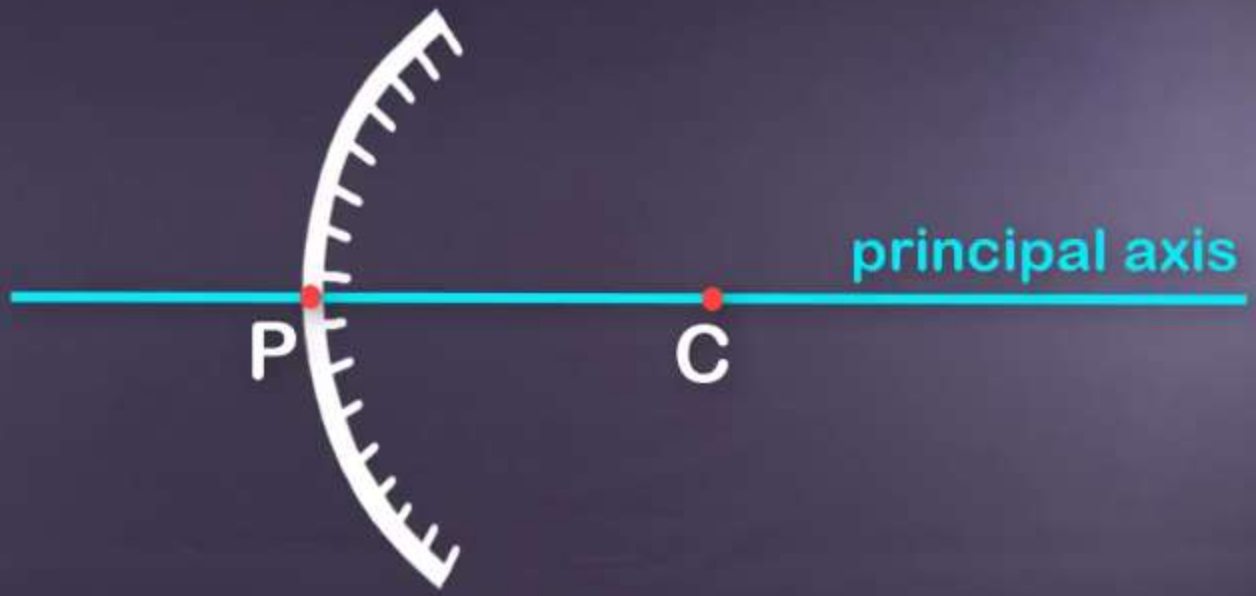

Convex mirror

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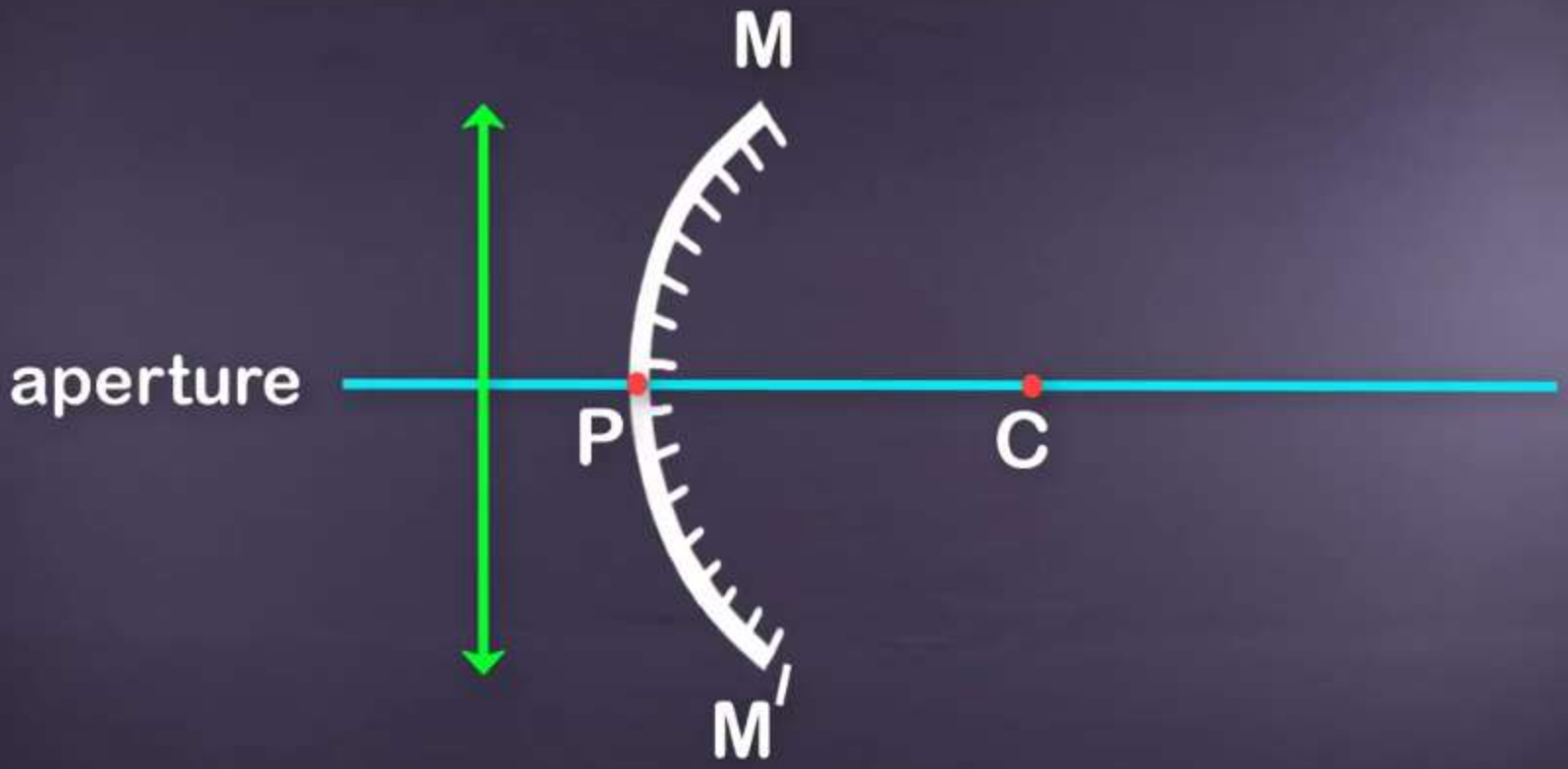

Convex mirror

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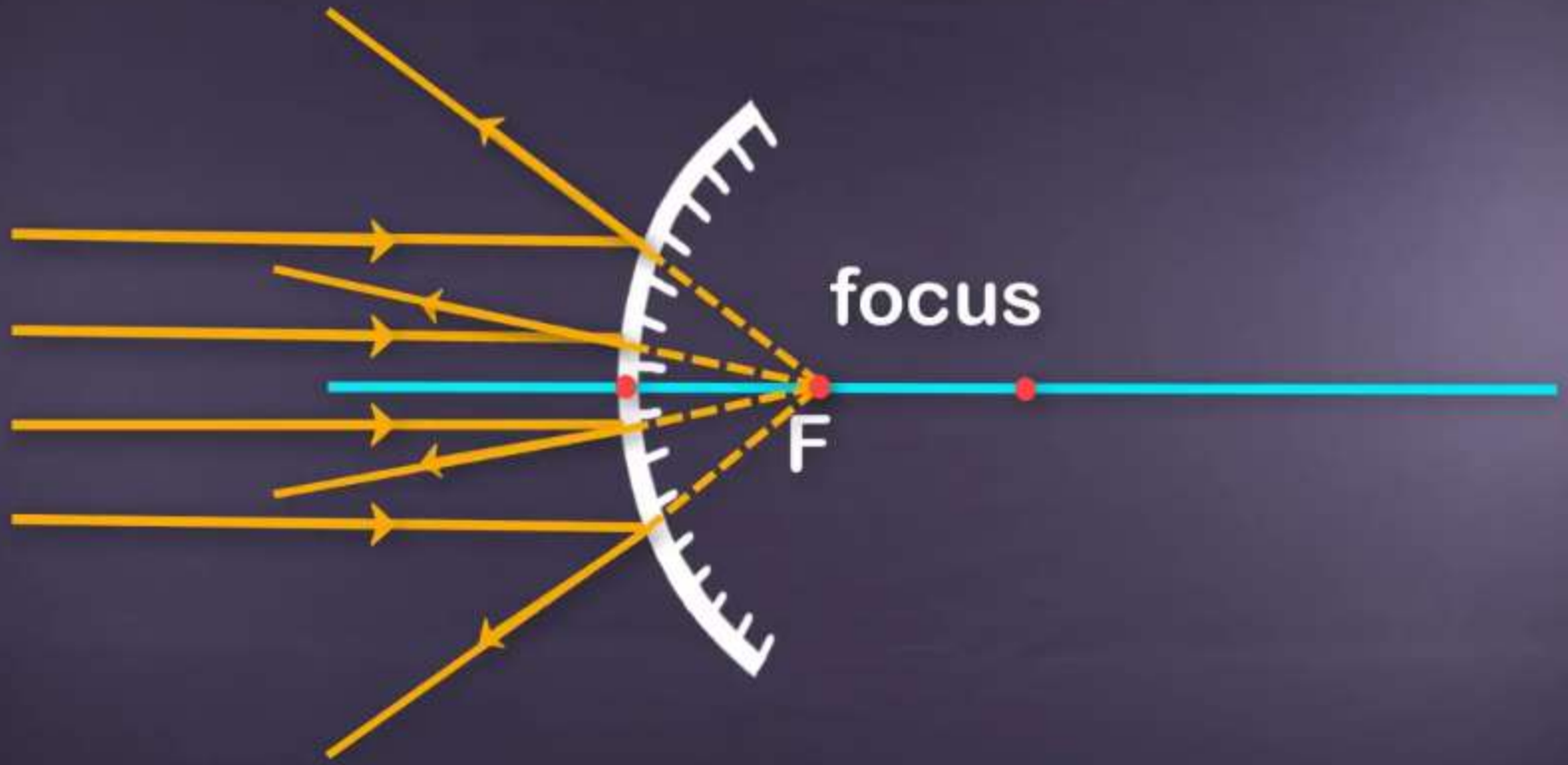

Convex mirror

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Convex mirror

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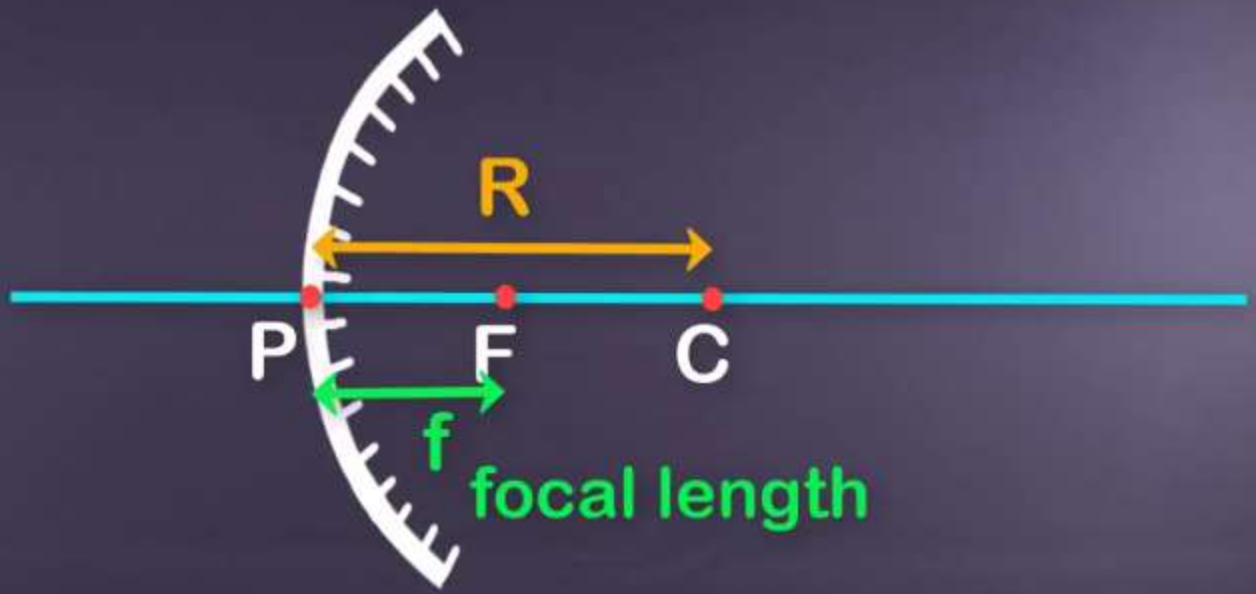
$$f = \frac{R}{2}$$



Convex mirror

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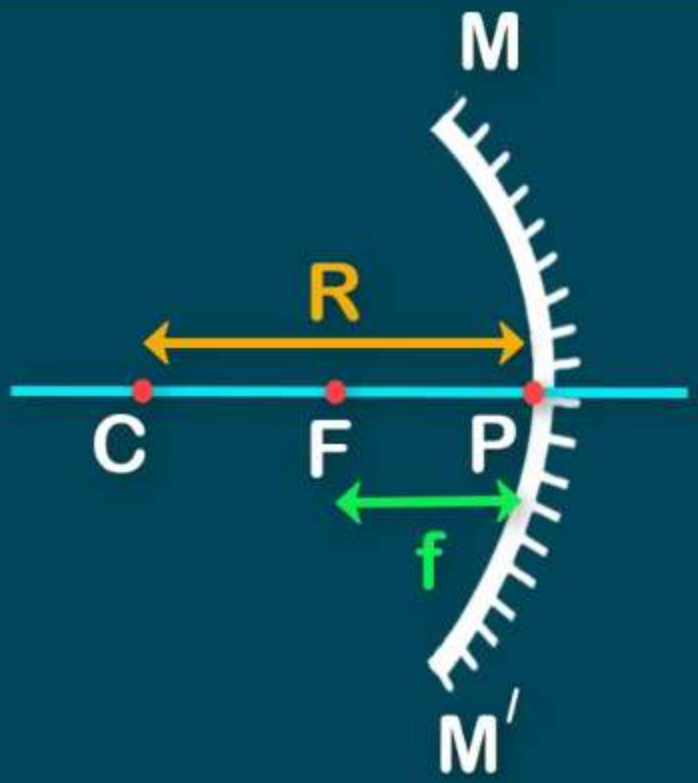
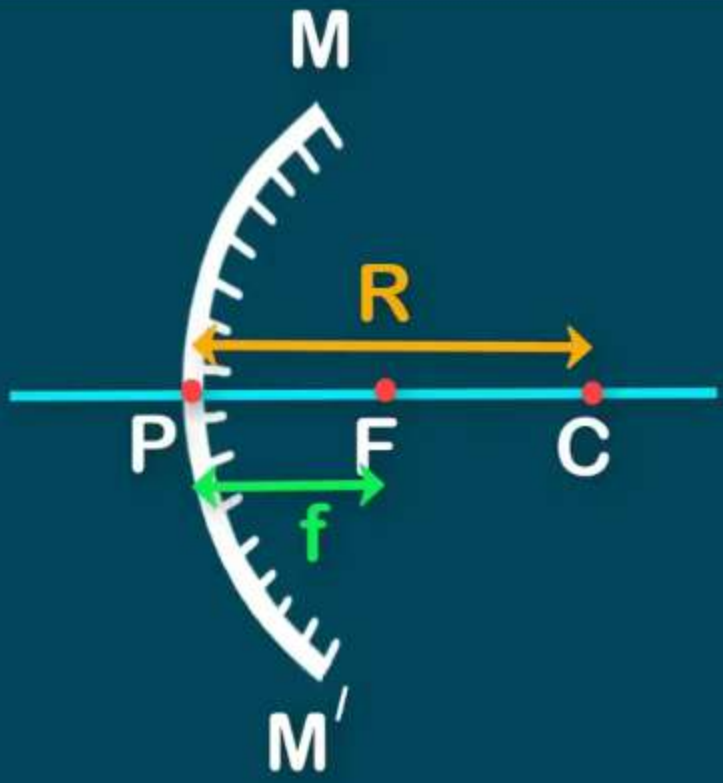


Concave mirror



Convex mirror

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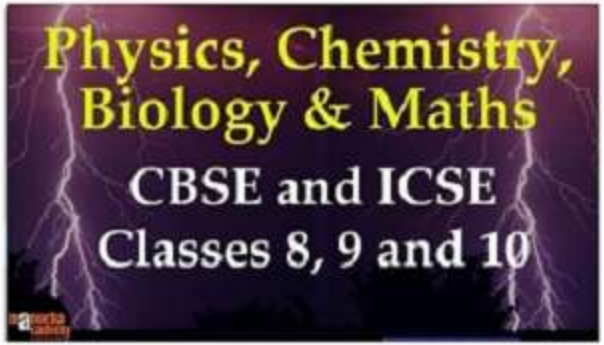

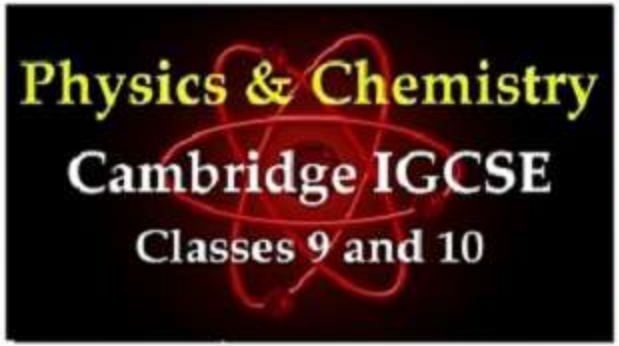

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